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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,285	08/26/2003	Akihito Onishi	MAE 293	2674

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EXAMINER

ROYER, WILLIAM J

ART UNIT	PAPER NUMBER
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2852

DATE MAILED: 01/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/647,285

Applicant(s)

ONISHI ET AL.

Examiner

William J. Royer

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,4,5,9-13,15,16 and 18 is/are rejected.
- 7) ☒ Claim(s) 2,3,6-8,14,17 and 19 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. ____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Drawings

The drawings are objected to because of the following informalities:

In Figure 4(a), insert reference numeral "11b" and a corresponding lead line in order to identify the edge described in the specification.

Figures 9 and 10(a)-10(c) should be designated by a legend such as --Prior Art -- because only that which is old is illustrated. See MPEP § 608.02(g).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The disclosure is objected to because of the following informalities:

On page 1, line 20, change "the toner adhere to" to --- a toner 54 to adhere to ---.

On page 1, line 25, change "the toner to" to --- the toner 54 to ---.

On page 1, line 27, change "form" to --- from ---.

On page 2, line 11, after "apparatus" insert --- 50 ---.

On page 3, lines 13 and 20, change "image in" to --- image on ---.

On page 3, line 15, after "paper" insert --- 60 ---.

On page 3, line 26, change "not-illustrate" to --- not-illustrated ---.

On page 4, line 16, change "bee" to --- been ---.

On page 4, line 18, change "device" to --- unit ---.

On page 5, line 13, change "52" to --- 61 ---.

On page 5, lines 21 and 23, after "drum" insert --- 51 ---.

On page 5, line 21, after "roller" insert --- 52 ---.

On page 5, line 25, after "apparatus" insert --- 50 ---.

On page 5, line 28, change "problem of the" to --- problem of an ---.

On page 5, line 29, change "in the" to --- in an ---.

On page 5, line 30, change "periphery of the" to --- periphery of a ---.

On page 6, line 19, change "first" to --- second ---.

On page 8, line 1, change "51serving" to --- 51 serving ---.

On page 8, line 15, an "edge" is identified by reference numeral "4a", however, reference numeral "4a" does not appear to be shown in Figure 1.

On page 8, line 19, change "the toner carrying" to --- a toner carrying ---.

On page 8, line 30, change "a wiring" to --- wiring ---.

On page 8, line 33, change "plate" to --- holder ---.

On page 9, line 11, change "toner spiral" to --- toner carrying spiral ---.

On page 10, line 27, change "periphery of the photoconductor drum" to --- periphery 51a of the photoconductive drum 51 ---.

On page 10, line 29, change "photoconductor drum" to --- photoconductive drum 51 ---.

On page 11, line 1, after "roller" insert --- 52 ---.

On page 11, line 10, change "on the photoconductive drum" to --- of the photoconductive drum 51 ---.

On page 11, line 11, after "auxiliary" insert --- charging unit ---.

On page 11, lines 15, 27, 28, 30 and 32, after "drum" insert --- 51 ---.

On page 12, line 2, after "blade" insert --- 3 ---.

On page 12, line 3, change "Table1" to --- Table 1 ---.

On page 12, line 8, change "is at an acceptable" to --- is acceptable ---.

On page 13, line 11, after "blade" insert --- 3 ---.

On page 13, line 15, after "drum" insert --- 51 ---.

On page 13, line 17, before "electrostatic" insert --- an ---.

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On page 13, line 27, change "the cleaning blade" to --- a cleaning blade 11 ---.

On page 14, line 10, change "A" to --- The ---.

On page 14, line 29, change "the toner receiver" to --- a toner receiver ---.

On page 14, line 33, change "the toner spiral" to --- a toner carrying spiral ---.

On page 15, line 5, change "the voltage supplied from the dedicated power" to ---
a voltage supplied from a dedicated power ---.

On page 16, line 1, change "3" to --- 11 ---.

On page 16, line 4, after "drum" insert --- 51 ---.

On page 16, line 23, change "cleaning blade, the cleaning unit" to --- cleaning
blade 11, the cleaning unit 10 ---.

On page 17, line 3, change "the metal holder" to --- a metal holder ---.

On page 17, line 13, change "the cleaning blade 11" to --- a cleaning blade 11 ---.

On page 17, line 32, before "rubber" insert --- semiconductive ---.

On page 18, line 7, change "the toner receiver" to --- a toner receiver ---.

On page 18, line 11, change "the toner spiral" to --- a toner carrying spiral ---.

On page 18, line 16, change "the voltage supplied from the dedicated power" to -
-- a voltage supplied from a dedicated power ---.

On page 18, line 25, before "rubber" insert --- semiconductive ---.

On page 19, line 4, change "3" to --- 11 ---.

On page 19, line 8, after "drum" insert --- 51 ---.

On page 19, lines 8 and 14, before "rubber" insert --- semiconductive ---.

On page 20, line 7, change "the cleaning blade" to --- a cleaning blade 11 ---.

- On page 20, line 20, change "showing the" to --- showing a ---.
- On page 20, line 22, change "smiconductive" to --- semiconductive ---.
- On page 20, line 26, change "the d.c." to --- a d.c. ---.
- On page 20, line 26, change "the dedicated" to --- a dedicated ---.
- On page 20, line 32, change "the toner receiver" to --- a toner receiver ---.
- On page 21, line 3, change "the toner spiral" to --- a toner carrying spiral ---.
- On page 21, line 21, change "the toner receiver" to --- a toner receiver ---.
- On page 21, line 22, change "the d.c." to --- a d.c. ---.
- On page 21, line 22, change "by the" to --- by a ---.
- On page 22, line 2, change "drum" to --- Drum ---.
- On page 23, line 12, change "the cleaning blade 11" to --- a cleaning blade 11 ---.
- On page 23, line 27, change "the toner receiver" to --- a toner receiver ---.
- On page 24, line 7, change "the d.c." to --- a d.c. ---.
- On page 24, line 8, change "the dedicated" to --- a dedicated ---.
- On page 24, line 21, change "fourth" to --- fifth ---.
- On page 25, line 6, after "roller" insert --- 31 ---.
- On page 25, line 8, after "fibers" insert --- 33 ---.
- On page 26, lines 9 and 22, change "30" to --- 11 ---.
- On page 26, line 19, after "roller" insert --- 52 ---.
- On page 27, line 12, change "the cleaning blade" to --- a cleaning blade 11 ---.
- On page 27, line 28, change "the metal holder" to --- a metal holder ---.
- On page 28, line 19, change "the dedicated" to --- a dedicated ---.

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On page 29, line 4, after "cleaning unit" insert --- 35 ---.

On page 30, line 12, after "cleaning unit" insert --- 35 ---.

On page 30, line 13, after "precharging device" insert --- 36 ---.

On page 36, line 2, delete --- of the invention ---.

Appropriate correction is required.

Claim Objections

Claim 3, 13 and 15 are objected to because of the following informalities:

Claim 3, line 6, change "device. ." to --- device. ---.

Claim 13, line 2, after "comprising" insert --- a ---.

Claim 15, line 3, after "of" insert --- the ---.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 5, 9, 11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Douthett. Referring to Figure 1, an image forming apparatus is shown. The image forming apparatus including: a drum 11 (i.e., image carrier) rotatable in a predetermined rotative direction; a charging station 14 (i.e., charging unit) for charging a surface of the drum; a cleaning brush 26 (i.e., precharging device) disposed upstream from the charging station with respect to the predetermined rotative direction of the drum for precharging the surface of the drum; and a source of AC voltage 34 (i.e., voltage supply unit) for supplying a voltage to the cleaning brush to impart charge to the bristles. Further, intermediate the cleaning brush and the charging station is a cleaning blade 36 (i.e., cleaning unit) that is used to physically remove residual toner particles from the surface of the drum. It is disclosed that the cleaning brush includes a shaft 28 that has conductive fiber bristles 32 extending from the shaft so as to engage the surface of the drum. Furthermore, it is disclosed that supplying an AC charge to the cleaning brush serves to neutralize residual charges on the surface of the drum that assures charge uniformity in subsequent cycles.

Claims 1, 9 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Hashimoto et al. Referring to Figure 1, an image forming apparatus is shown. The image forming apparatus including: a photosensitive drum 1 (i.e., image carrier) rotatable in a predetermined rotative direction; a contact charging device 2 (i.e., charging unit) for charging a surface of the photosensitive drum; an electrically conductive brush as a pre-charging device 12 (i.e., precharging device) disposed

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upstream from the contact charging device with respect to the predetermined rotative direction of the photosensitive drum for precharging the surface of the photosensitive drum; and a bias from a voltage supply unit for supplying a bias (i.e., voltage) to the precharging device. It is disclosed that the image forming apparatus is not restricted to one utilizing the cleanerless process, but may be an image forming apparatus provided with a cleaning device used exclusively for removing any untransferred toner from the surface of the photosensitive drum after transfer (Col. 17, Lns. 34-38).

Claims 1, 4 and 9-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Koiso et al. Referring to Figures 2 and 3(b), an image forming apparatus is shown. The image forming apparatus including: a photoreceptor 1A (i.e., image carrier) rotatable in a predetermined rotative direction; a charger 11 (i.e., charging unit) for charging a surface of the photoreceptor; a conductive discharging member 156 (i.e., precharging device) disposed upstream from the charger with respect to the predetermined rotative direction of the photoreceptor for precharging the surface of the photoreceptor; and a source of voltage (i.e., voltage supply unit) for supplying a voltage to the discharging member. Further, a cleaning blade 160 (i.e., cleaning unit) is provided to remove residual toner from the surface of the photoreceptor and is located upstream from the charger with the discharging member being located upstream from the cleaning blade. It is disclosed that the discharging member should have a surface resistance of 10^3 to 10^8 .

Claims 1, 15, 16 and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Hirabayashi et al. Referring to Figure 1, an image forming apparatus is shown. The image forming apparatus including: a photosensitive member 1 (i.e., image carrier) rotatable in a predetermined rotative direction; an electrifying roller 2 (i.e., charging unit) for charging a surface of the photosensitive member; a noncontact conductive member 6 (i.e., precharging device; semiconductive member) disposed approximately in parallel with the photosensitive member and upstream from the electrifying roller with respect to the predetermined rotative direction of the photosensitive member for precharging the surface of the photosensitive member ; and a power source S4 (i.e., voltage supply unit) for supplying a voltage to the noncontact conductive member. It is disclosed that by projecting a spacer roller (i.e., spacing member) at its ends towards the surface of the photosensitive member, a distance c can be set between the photosensitive member and the noncontact conductive member. It is also disclosed that the noncontact conductive member is a rod (i.e., semiconductive plate) with a silicon resin (i.e., semiconductive resin) dispersed with carbon black coated thereon.

Allowable Subject Matter

Claims 2, 3, 6-8, 14, 17 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Relevant Prior Art

The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Haga et al disclose an image forming apparatus and method using a charge control means.

Yamaki et al disclose a contact-type erasing device for an image forming apparatus.

Kinosita et al disclose an image forming apparatus capable of charge erasing a latent image.

Sanmonji discloses an image forming apparatus including a conductive film attached to a cleaning blade.

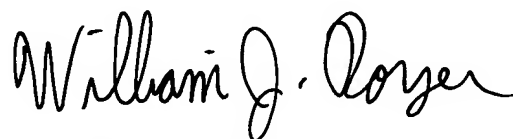
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William J. Royer whose telephone number is (571) 272-2140. The examiner can normally be reached on Monday-Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur T. Grimley can be reached on (571) 272-2136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, reading "William J. Royer". The signature is fluid and cursive, with the first name "William" and last name "Royer" clearly legible.

William J. Royer
Primary Examiner
Art Unit 2852

wjr
January 7, 2005